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THE ART AND SCIENCE OF CANCER NURSING IN THE GENOMIC ERA

NURSING PRACTICE in 2004 requires both an understanding of basic science and the translation of that science into the clinical management of patients. Nurses who possess these skills are in high demand in our society. Cancer nursing practice has been at the cutting edge of implementing evidence-based improvements in patient care during the past decade, and it has provided a model for all nurses in the science and art of translating these basic scientific advances into clinical practice. Many of the scientific rewards of the genomic era have been translated into oncology clinical practice at a faster rate than in other areas of health care. Decades of cancer research in cell biology have fueled genetic research and have been catalyzed by the elucidation of the human genome. Nowhere is this more evident than in oncology nursing.

The challenge for oncology nurses, and for all heath care professionals, is to maintain, simultaneously, their mastery of the state of the science and the art of patient care. How often have you encountered the patient who has read the front page of the *New York Times* before you have had a chance to hear of the latest cancer treatment that was just approved? How many work hours are you given for continuing education? Ideally, continuing education should be a weekly (some might say daily) part of our professional lives, and not just confined to the occasional annual professional conference. And yet, the science that affects our everyday work life is neither simple nor easily absorbed; new observations are often controversial, requiring confirmation, discussion, and considerable thought before their management implications are evident. This is the world inhabited by oncology nurses in the 21st century, on the cutting edge of science, technology, ethics, and clinical practice.

As we enter the genomic era, professional nursing organizations have responded to this challenge by developing excellent guidelines for the nursing care of patients. The Oncology Nursing Society has been a leader in the development of position statements regarding the role of the oncology nurse in cancer genetic counseling and in cancer predisposition testing.[1] In addition, the American Nurses Association and the International Society of Nurses in Genetics[2] have developed standards of care for nurses working in genetic health care. The greatest challenge is to ensure that all professional nurses are familiar with these standards of practice, and encouraged to apply them while delivering patient care in the genomic era.

The *Seminars in Oncology Nursing* issue from 1997 on "Genetics and Cancer"[3] provided an excellent summary of information available at that time, in relation to cancer genetics for the oncology nurse, in all practice settings. The goal of that issue was to help oncology nurses gain a basic understanding of genetic concepts and the issues related to patient care in clinical cancer genetics. The goals of this 2004 issue of "Genetics and Cancer" are to:

- Review the state of the science of clinical cancer genetics, including:
  - The biology of genes;
  - Clinical applications of genetics in sporadic cancers;
  - Issues related to common hereditary cancer syndromes;
  - Highlight the evolving role of the nurse in clinical cancer genetics research and patient care;
  - Propose new concepts within the traditional framework of cancer nursing care; and
  - Identify future research directions for our emerging discipline.

The authors contributing to this issue of *Seminars in Oncology Nursing* are all experts in their fields. The disciplines of nursing, behavioral science, genetic counseling, and law are represented. These authors have influenced the evolution of nursing practice in genetic and oncology health care. They are role models in genetic oncology nursing, and thereby the role models for all of genetic nursing practice. They represent a larger cohort of nursing professionals who have greatly influenced and continue to shape the evolving role of nurses in genetic health care. Jean Jenkins, PhD, closes this issue with her thoughts on where we are today and the prospect of whether we are ready for tomorrow. Her commentary is particularly appropriate because she is a critical leader within our discipline, having been at the forefront of incorporating genetic issues and information into oncology nursing practice.

Nurses today are also well-represented in influential programs within the federal government, clinical practice, academia, and industry; probably more now than at any time in history. Their expertise in genetic health care is sought and valued for the clinical insights they possess and the information they have mastered. They are essential members of the community of professionals responsible for developing and implementing the roadmap for genetic health care over the next decade.

The future of the nursing profession is bright and filled with promise. The need for nurses in a wide variety of settings is at an all-time high. With an aging Baby Boomer population, the outlook for nursing employment, at all levels of practice, can only improve. The challenge for us, as it has always been, is to balance the professional demands of the workplace and the needs of our patients with the professional requirement for continuing education (as well as all of the other balancing we do). Nurses must continue to refine and upgrade their practice as science and the standards of clinical care change. This issue of *Seminars in Nursing Oncology* provides an eloquent benchmark of where we are in 2004, as this fascinating and rewarding journey continues.

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